

# Sea turtles



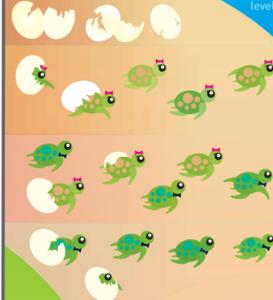
## Climate change a cold blooded killer

Because the marine environment is relatively stable, many marine animals have not adapted to cope with even small changes to their habitat. Like fish and most reptiles, sea turtles are 'cold blooded' ectotherms. This means their body temperature changes with the temperature of their environment.

If sea temperatures become too warm or too cold, ectotherms, like sea turtles, can't survive. Climate change is turning up the heat for already threatened sea turtles and putting future generations of turtle toddlers at risk.



HIGH RISK OF NEST FAILURE



Rising water levels can erode sand nests

## Gender bender

Sea turtles lay their eggs in nests they dig on sandy beaches. The temperature of the nest determines the gender (male or female) of the hatchlings. As nest temperature increases, more female hatchlings are born leading to an unbalanced population. If temperatures get too high, the fragile eggs won't hatch at all.

## Australia's treasured turtles

Six of the world's seven species of sea turtles live in the Great Barrier Reef Marine Park. These are the loggerhead, green, hawksbill, flatback, leatherback and olive ridley turtles.



Eastern Australian beaches support the only significant **loggerhead turtle** breeding stock in the south Pacific.



The world's largest aggregation of nesting **green turtles** occurs at Raine Island, in the far northern Great Barrier Reef.



One of the world's largest **hawksbill turtle** nesting populations occurs in the northern Great Barrier Reef, primarily at Milman Island.



**Flatback turtles** are endemic to Australia and not known to venture off the Australian continental shelf.



*With so many sea turtles at risk from climate change, maintaining the health of Australia's oceans is more important than ever.*

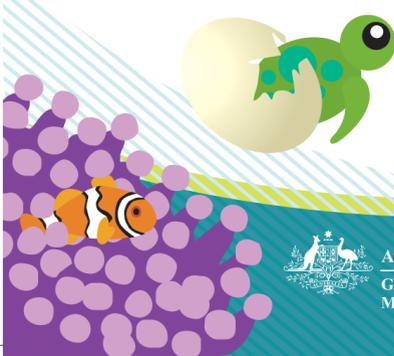
## Why are all turtle species on the Great Barrier Reef threatened?

All sea turtles are listed as vulnerable or endangered and their biggest threat is humans.

### Threats include:

- > Climate change
- > Coastal development and loss of habitat
- > Hunting and collecting
- > Fishing activities
- > Declining water quality
- > Boat strikes
- > Pollution and marine debris
- > Marine dredging and construction
- > Feral animals destroying nests and eating eggs
- > Disease

Climate change is having a devastating impact on sea turtles. Experts believe that unless drastic measures are taken to reduce climate change impacts, most northern Great Barrier Reef green turtle rookeries will produce only female hatchlings by 2070 and populations will be unable to reproduce within 60 years. Other likely impacts of climate change include decreased seagrass food supplies and reduced nesting habitat due to sea level rise and coastal erosion.



Australian Government  
Great Barrier Reef  
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# REEF Beat 7